

What is claimed is:

[Claim 1] A slim-profile centrifugal fan comprising:

a housing;

a motor component supported in said housing, said motor component having a stator and a rotary section, furnished with a rotor magnet, rotative about a rotational axis; and

an airflow-generating component fixed to said rotary section, said airflow-generating component having

a disk portion centered on the rotational axis and defining an axial upper end of said airflow-generating component,

a cylindrical portion extending down from the rim of said disk portion,

a plurality of circumferentially evenly spaced posts projecting outward,

orthogonal to the rotational axis, from the outer circumferential surface of said cylindrical portion

and

blades each fixed to a respective outer peripheral end of each of said posts,

said airflow-generating component being configured so that, with the

rotational axial height of said posts being $d1$, the circumferentially

circumscribed width of said posts orthogonal to the height $d1$ being $e1$, the

thickness of said blades being $d2$, and the rotational axial height of said

blades in the vicinity of the portion of said blades that is fixed to the posts

being $h3$, then $d1 < h3$ and $e1 > d2$.

[Claim 2] A centrifugal fan as set forth in claim 1, wherein:

said rotor magnet is provided on the inner circumferential surface of said cylindrical portion;

said stator is disposed inside a space enclosed by said disk portion and said cylindrical portion, and opposes said rotor magnet; and

with the rotational axial height of said cylindrical portion being $h1$ and the

radius to the outer circumferential surface of said cylindrical portion being r ,

said cylindrical portion satisfies the relation $h1 < r$.

[Claim 3] A centrifugal fan as set forth in claim 2, wherein:

said posts are oriented so that the center axial line passing through said posts in the direction that said posts project from the outer circumferential surface of said cylindrical portion will be at a predetermined angle with respect to a line extending the cylindrical-portion radius that passes through the intersection of the center axial line and the outer circumferential surface of said cylindrical portion in a plane containing the center axial line and the radius.

[Claim 4] A centrifugal fan as set forth in claim 3, wherein with a horizontal plane containing the upper surface of said disk portion being a reference plane, said blades are disposed so as not to extend beyond the reference plane.

[Claim 5] A centrifugal fan as set forth in claim 4, wherein said airflow-generating component, said disk portion, said posts, and said blades are formed integrally from a synthetic resin.

[Claim 6] A centrifugal fan as set forth in claim 5, wherein:

said blades have a minor-width portion defined by the rotational-axial height $h3$, and a major-width portion where the blades extend longitudinally outward from their joint with said posts; and are configured so that, with the rotational-axial height of the major-width portion being $h2$, said blades satisfy $h3 < h2$.

[Claim 7] A centrifugal fan as set forth in claim 6, wherein the major-width portion of said blades satisfies $h2 < h1$.

[Claim 8] A centrifugal fan as set forth in claim 6, wherein with the rotational-axial height of said motor component being $h4$, the major-width portion of said blades satisfies $h1 < h2 < h4$.

[Claim 9] A centrifugal fan as set forth in claim 1, wherein:

the rotational-axial height $h3$ of said blades is at least approximately twice the rotational axial height $d1$ of said posts; and
the circumferentially circumscribed width $e1$ of said posts is at least approximately twice the thickness $d2$ of said blades.

[Claim 10] A centrifugal fan as set forth in claim 9, wherein:

said rotor magnet is provided on the inner circumferential surface of said cylindrical portion;

said stator is disposed inside a space enclosed by said disk portion and said cylindrical portion, and opposes said rotor magnet; and

with the rotational axial height of said cylindrical portion being $h1$ and the radius to the outer circumferential surface of said cylindrical portion being r , said cylindrical portion satisfies the relation $h1 < r$.

[Claim 11] A centrifugal fan as set forth in claim 10, wherein:

said posts are oriented so that the center axial line passing through said posts in the direction in which said posts extend longitudinally will be at a predetermined angle with respect to a line extending the cylindrical-portion radius that passes through the intersection of the center axial line and the outer circumferential surface of said cylindrical portion in a plane containing the center axial line and the radius.

[Claim 12] A centrifugal fan as set forth in claim 11, wherein with a horizontal plane containing the upper surface of said disk portion being a reference plane, said blades are disposed so as not to extend beyond the reference plane.

[Claim 13] A centrifugal fan as set forth in claim 12, wherein said airflow-generating component, said disk portion, said posts, and said blades are formed integrally from a synthetic resin.

[Claim 14] A centrifugal fan as set forth in claim 13, wherein:

said blades have a minor-width portion defined by the rotational-axial height h_3 , and a major-width portion where the blades extend longitudinally outward from their joint with said posts; and
are configured so that, with the rotational-axial height of the major-width portion being h_2 , said blades satisfy $h_3 < h_2$.

[Claim 15] A centrifugal fan as set forth in claim 14, wherein the major-width portion of said blades satisfies $h_2 < h_1$.

[Claim 16] A centrifugal fan as set forth in claim 14, wherein with the rotational-axial height of said motor component being h_4 , the major-width portion of said blades satisfies $h_1 < h_2 < h_4$.